Appendix Table C1-LQ-a. Study characteristics for VAP which do not control for secular trend or confounding

| **Study** | **Study Design** | **Infection** | **Healthcare Setting** | **Clinical Setting** | **Intervention Years** | **Follow-up (months)** | **Comment** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Abbott, United States - 2006 | Simple Before-after | VAP | More than one hospital of different types | Medical Intensive Care Unit, Surgical Intensive Care Unit Burn ICU, Trauma ICU | 2004 - 2004 | 3 | CDC/NNIS definition was used. Baseline was from April 2002 through June 2002. 5 ICUs within 2 hospitals participated. |
| Assanasen, - 2008 | Simple Before-after | CLABSI;VAP | Tertiary care or university hospital | Medical Intensive Care Unit, Surgical Intensive Care Unit | 2004 - 2006 | 24 | CDC definitions were used. Baseline period was from April 2004 through June 2004 |
| Berriel-Cass, United States - 2006 | Simple Before-after | CLABSI;VAP | More than one hospital of different types | Medical Intensive Care Unit, Surgical Intensive Care Unit Cardiac ICU; Cardiovascular ICU; Medical/Surgical ICU | 2004 - 2006 | 23 | CDC/NNIS definition was used.; 1 hospital, with a MICU, SICU, Cardiac ICU and Cardiovascular ICU, implemented the CLABSI bundle and the other, with a Medical/Surgical ICU and Cardiovascular ICU, implemented the VAP bundle. In total there were 6 ICUS. Baseline CLABSI: July 2003 to January 2004. Baseline VAP: January 2003 to January 2004. |
| Bigham, United States - 2009 | Simple Before-after | VAP | Tertiary care or university hospital | Pediatric Intensive Care Unit | 2005 - 2005 | 28 | CDC/NNIS definition was used. Pre-implementation period was from January 1, 2004 through December 31, 2004. Implementation period was from January 1, 2005 through August 31, 2005. Post-implementation period was from September 1, 2005 through December 31, 2007. |
| Bird, United States - 2010 | Simple Before-after | VAP | Tertiary care or university hospital | Trauma/General Surgery ICU, Subspecialty surgery ICU | 2006 - 2009 | 31 | CDC definition was used. Baseline period was from March 1, 2006 through September 30, 2006. The implementation and follow-up period was from October 1, 2006 through May 31, 2009. Study included 2 ICUs. |
| Blamoun, United States - 2009 | Simple Before-after | VAP | Tertiary care or university hospital | Medical Intensive Care Unit | 2004 - 2007 | 30 | Baseline: 2003 to 2004 for a total of 18 months. |
| Bloos, Germany - 2009 | Simple Before-after | VAP | Tertiary care or university hospital | Surgical Intensive Care Unit | 2005 - 2005 | 4 | Clinical Pulmonary Infection Score (CPIS) was used. Baseline period (Audit I) was from June 2005 through September 2005. The intervention was implemented from October 2005 through November 2005. Follow-up period (Audit II) was from March 2006 through June 2006 |
| Cocanour, United States - 2006 | Simple Before-after | VAP | Tertiary care or university hospital | Shock Trauma ICU (STICU) | 2002 - 2003 | 12 | NNIS definition was used. Baseline period was from January 2002 through May 2002. VAP bundle began in June 2002. Audit and feedback began in October 2002. Follow-up period was from June 2002 through June 2003. |
| Garcia, United States - 2009 | Simple Before-after | VAP | Tertiary care or university hospital | Medical Intensive Care Unit | 2002 - 2004 | 24 | CDC definition was used. Baseline: January 1, 2001, to December 31, 2002. |
| Gurskis, Lithuania - 2009 | Simple Before-after | CAUTI, CLABSI, VAP | Tertiary care or university hospital | Pediatric Intensive Care Unit | 2005-2007 | 12 | Preintervention from January 2005 through 2006. In 3 pediatric ICUs. |
| Heimes, United States - 2011 | Simple Before-after | VAP | Tertiary care or university hospital | Trauma ICU | 2004 - 2008 | 54 | CDC definition was used. Baseline period was from January 2003 through December 2003. Implementation period was January 2004 to December 2005. Strict implementation of the VAP protocol was from January 2006 through June 2008. Record 58600 was published in 2007 and only presents d |
| Jain, United States - 2006 | Simple Before-after | CAUTI;CLABSI;VAP | Hospital type unspecified | Medical/Surgical ICU | 2002 - 2003 | 12 | CDC definitions were used. Baseline period was from October 2000 through September 2002. |
| Jimenez, United States - 2009 | Simple Before-after | VAP | Tertiary care or university hospital | Neurosurgical ICU | 2007 - 2007 | 4 | Infection rates were not observed. 14 consecutive days in July/August 2007 were used as pre-intervention adherence and 14 consecutive days in December 2007 were used as post-intervention adherence |
| Landrum, Afghanistan - 2008 | Simple Before-after | VAP | Combat Support Hospital | Mixed ICU | 2006 - 2006 | 6 | CDC definition is used. This is a USO field hospital. Baseline period was from May 1, 2006 through May 31, 2006; Intervention period was from June 1, 2006 through August 31, 2006; Targeted surveillance took place in November and December of 2006 |
| Quenot, France - 2007 | Simple Before-after | VAP | Tertiary care or university hospital | Medical Intensive Care Unit | 2001 - 2003 | 24 | Definition is spelled out on pg 2033. Baseline period is from May 1999 through May 2001. The intervention period was from December 2001 through December 2003. |
| Rogers, Ireland - 2010 | Simple Before-after | CLABSI;VAP | More than one hospital of different types | Neonatal ICU |  | 6 | CDC definition was used. Years of the study period were not included. 6 months of baseline data collection occurred, then a 3 month intervention then 6 more months of post-intervention surveillance took place. |
| Rosenthal, Argentina - 2006 | Simple Before-after | VAP | More than one hospital of different types | Medical/Surgical ICU, Coronary ICU | 2002 - 2002 | 12 | CDC definition was used. Baseline period (Phase 1) was from January 2001 through December 2001. The Intervention/Follow-up period (Phase 2) was from January 2002 through December 2002. |
| Ross, United States - 2007 | Simple Before-after | VAP | Tertiary care or university hospital | Surgical Intensive Care Unit Pulmonary/Medicine ICU, Vascular Surgery ICU, Cardiothoracic Surgery ICU, Neurosurgery ICU, Trauma ICU |  | 2 | CDC/NNIS definition was used. No dates were reported. |
| Sona, United States - 2009 | Simple Before-after | VAP | Tertiary care or university hospital | Surgical Intensive Care Unit | 2004 - 2005 | 12 | NNIS criteria were used to diagnose VAP. Pre-intervention period was from June 2003 through May 2004. The post-intervention period was from June 2004 through May 2005. |
| Venkatram, United States - 2010 | Simple Before-after | CAUTI;CLABSI;VAP | Tertiary care or university hospital | Medical Intensive Care Unit | 2005 - 2007 | 36 | CDC/NNIS definitions were used. 2004 was the pre-intervention period for CLABSI and CAUTI. 2005 was the pre-intervention period for VAP. |